

REMARKS

Claim 1 has been amended so that it is directed to a sheet for light guiding plates comprising a resin comprising, among other things, a polymer comprising a polymerizable material consisting of methyl methacrylate and a monofunctional acrylate, and a polyfunctional (meth)acrylate, wherein the content of the polyfunctional (meth)acrylate is 0.15 to 2 parts per 100 parts by weight of the polymerizable material. Support for these amendments exists throughout the present specification, including the examples (particularly examples 1 and 5).

New claims 15-19, directed to specific embodiments of the present invention, have been added. Support for these new claims exists throughout the present specification, including the examples.

Claims 1, 3-7 and 9-19 are currently pending.

The Office Action rejected claims 1 and 3-14 under 35 U.S.C. § 102 as anticipated by JP 2002-256128 ("Masuda"), and claims 1 and 3-8 under 35 U.S.C. § 103 as obvious over U.S. patent 5,726,268 ("Sakamoto") in view of Masuda. In view of the following comments, Applicants respectfully request reconsideration and withdrawal of these rejections.

The claimed invention relates to a sheet for light guiding plates, where the resin comprises 0.01 ppm to 1000 ppm of a particulate diffusing agent and a polymer obtained by polymerizing a mixture comprising a polymerizable material consisting of methyl methacrylate and a monofunctional acrylate, and a polyfunctional (meth)acrylate, wherein the content of the monofunctional acrylate in the polymerizable material is 9 % by weight or less and the content of the polyfunctional (meth)acrylate in the mixture is 0.15 to 2 parts per 100 parts by weight of the polymerizable material.

Masuda neither teaches nor suggests this invention. For example, Masuda neither teaches nor suggests the claimed polymerizable material consisting of methyl methacrylate and a monofunctional acrylate, and a polyfunctional (meth)acrylate. Rather, although Masuda discloses numerous monomers which could be copolymerized with methyl methacrylate in par. [0013], Masuda neither teaches nor suggests using a monofunctional acrylate together with a polyfunctional (meth)acrylate as required by the present invention. Indeed, none of Masuda's examples contain any polyfunctional (meth)acrylate, let alone the required combination of elements. For at least this reason Masuda cannot teach or suggest the claimed invention.

Not only does Masuda fail to disclose the required constituents of the claimed polymerizable material, Masuda also fails to disclose specific concentration ranges for these individual constituents. Nowhere does Masuda teach or suggest that the content of the monofunctional acrylate in the polymerizable material should be 9 % by weight or less and the content of the polyfunctional (meth)acrylate should be 0.15 to 2 parts per 100 parts by weight of the polymerizable material. For this reason as well Masuda cannot teach or suggest the claimed invention.

The examples in the present application demonstrate the significance of these requirements set forth in the pending claims which are neither taught nor suggested by Masuda.

For example, comparative example 3 contains 10% monofunctional acrylate and, thus, falls outside the pending claims. As indicated in Table 1 (at page 12), this comparative example suffered significant scorching during cutting. This example demonstrates the significance of the limitation that "the content of the monofunctional acrylate in the polymerizable material is 9 % by weight or less."

Also, comparative example 1 contains no polyfunctional (meth)acrylate. As indicated in Table 1 (at page 12), this comparative example also suffered significant scorching during cutting. This example demonstrates the significance of the limitation that “the content of the polyfunctional (meth)acrylate in the mixture is 0.15 to 2 parts per 100 parts by weight of the polymerizable material.”

Clearly, Masuda neither teaches nor suggests the specific requirements of the claimed invention, nor any of the benefits associated with the claimed invention, particularly the improved processability (e.g., cutting, polishing) of these materials. (such as those benefits identified in the examples of the present application). Nor does Masuda provide any motivation to modify his disclosure in such a way to yield the claimed invention, using the required materials in the required amounts.

In view of the above, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. § 102.

Regarding the § 103 rejection, Sakamoto cannot compensate for Masuda’s fatal deficiencies. Sakamoto neither teaches nor suggests that (1) polyfunctional (meth)acrylate must be present; (2) monofunctional acrylate be present in an amount less than or equal to 9%; and (3) polyfunctional (meth)acrylate must be present in an amount of 0.15-2%. Thus, even assuming that Masuda and Sakamoto are properly combinable, their combination cannot lead to the claimed invention which requires specific materials in specific concentrations.

However, these references are not properly combinable. Sakamoto relates to extrusion or injection molding. In such moldings, the employed resins must have a high melt flow property. However, as the content of polyfunctional (meth)acrylates increases, the melt flow properties of the resins deteriorate (due to crosslinking). Thus, the content of such materials in injection/extrusion molding is much less than those in sheets for light guiding plates (see, e.g., Sakamoto’s examples which contain 0.015-0.079 parts by weight of ethylene

glycol dimethacrylate (EGDMA). In other words, disclosure concerning resins in injection/extrusion moldings teach or suggest nothing about resins in sheets for light guiding plates.

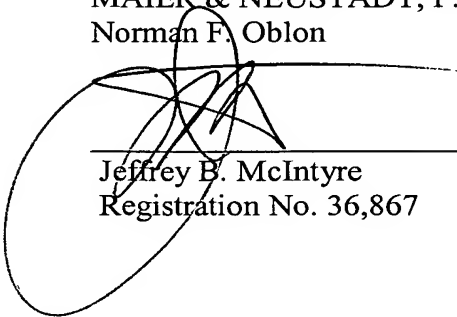
At any rate, the examples in the present application demonstrate significant advantages of the claimed invention over comparable, Masuda-esque or Sakamoto-esque compositions. Such benefits could not have been expected from Masuda's or Sakamoto's disclosures. These benefits, by themselves, demonstrate the novelty and non-obviousness of the claimed invention.

In view of the above, Applicants respectfully request reconsideration and withdrawal of the rejections under 35 U.S.C. § 103.

Applicants believe that the present application is in condition for allowance. Prompt and favorable consideration is earnestly solicited.

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